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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,440	07/10/2003	Rohit Dubey	01-IND-243	4206

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EXAMINER

BRITT, CYNTHIA H

ART UNIT PAPER NUMBER

2138

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/618,440	DUBEY, ROHIT	
	<b>Examiner</b>	<b>Art Unit</b>	
	Cynthia Britt	2138	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/10/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 7/7/06 have been fully considered but they are not persuasive.

As per applicants statement "Claims 4 and 5 stand rejected as rendered obvious by Mote, Jr. in view of IEEE 1149.1 standard, based on a contention that this IEEE standard is analogous art." It is unclear to the examiner how the "IEEE standard test access port and boundary scan architecture" could be non-analogous art for a claim reciting boundary scan circuit. However, as these claims have been cancelled, this point is being emphasized because current claims 7, 8, 14, and 15 recite similar limitations. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, applicant's claims are in the same field (boundary scan) that the IEEE standard is designed to cover, and the standard is cited in the background of the invention on pages 1 and 2 of the present specification. It is therefore submitted that the IEEE 1149.1 standard is analogous art and pertinent to the claimed boundary scan circuits..

Applicant also stated, "Claims 6 and 23 are amended above." As there is no claim 23 in the listed claims, the examiner will assume that this is a typographical error.

Applicant further states, "Claim 12 has been amended to properly conform to Fig. 5. All of the rejections under 35 U.S.C. § 112 have been addressed specifically, or inferentially by being dependent upon an allowable base claim."

As stated in the previous action (page 5) "The examiner would like to point out that this type of claim must be specific in claim language in order to particularly point out and distinctly claim the subject matter which applicant regards as the invention." Although the specific connections which were pointed out in the previous action have been clarified, the claim as a whole would not lead a person having ordinary skill in the art to "make or use" the circuit shown in figure 5. There are too many undefined connections within the claim language to even follow the data path of a circuit being tested. Therefore, 'All of the rejections under 35 U.S.C. § 112' have not been addressed and the claim language is not specific enough to "particularly point out and distinctly claim the subject matter which applicant regards as the invention." As stated in the previous office action this type of claim must be specific in the claim language.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 is incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

The inputs and outputs of the first and second multiplexers (and most of the other elements in this claim) are not defined.

The phrase “first and second multiplexers for receiving a shift/capture control signal;” does not define where the control signal is received.

The phrase “first and second capture registers coupled to the first and second multiplexers, respectively;” does not define whether the registers are coupled to the inputs or output of the multiplexers.

The phrase “first and second update register coupled to the first and second capture registers, respectively;” does not define how the registers are coupled as inputs or outputs.

The phrase “third and fourth multiplexers coupled to the first and second update registers, respectively for receiving a mode control signal;” does not clarify how the inputs and outputs are connected nor where the mode control signal comes from and how/where the mode control signal is connected.

The phrase “a buffer section coupled to the third and fourth multiplexers and to a pad;” does not define the pad as an input or an output nor does the phrase define whether the buffer is at the input or the output of the multiplexers.

The phrase "a first four-input multiplexer receiving the mode control signal and having at least one input coupled to the first multiplexer and at least one input coupled to the third multiplexer" is not clear what if anything is coupled to the remainder of the multiplexer inputs nor where the output of the multiplexer is connected nor what the multiplexer may be used to accomplish. It is not clear if the mode control signal in this phrase is the same mode control signal used with the third and fourth multiplexers (however the mode control signal would be assumed to be the same based on the wording).

In general, this claim is a collection of elements with a few relationships between a few of the elements. The examiner is not confident that a circuit could be tested using the claimed circuit, as it is not clear how the data would flow through this circuit.

Claims 7-12 inherit the 35 U.S.C. 112, second paragraph issues of the independent claim 6, and will not be further considered on their individual merits.

As per claim 13, this is incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. The issues are essentially the same as in claim 6. See MPEP § 2172.01. The omitted structural cooperative relationships are:

The phrase "a capture register circuit coupled to the first multiplexer circuit;" does not define whether the register is coupled to the inputs or output of the multiplexer.

The phrase "an update register circuit coupled to the capture register circuit;" does not define how the registers are coupled as inputs or outputs.

The phrase "a second multiplexer circuit coupled to the update register circuit for receiving a mode control signal;" does not clarify how the inputs and outputs are connected nor where the mode control signal comes from and how/where the mode control signal is connected.

The phrase "a buffer coupled to the second multiplexer circuit and to a pad." does not define the pad as an input or an output nor does the phrase define whether the buffer is at the input or the output of the multiplexers.

In general, this claim is a collection of elements with a few relationships between a few of the elements. The examiner is not confident that a circuit could be tested using the claimed circuit, as it is not clear how the data would flow through this circuit.

Claims 14-22 inherit the 35 U.S.C. 112, second paragraph issues of the independent claim 13, and will not be further considered on their individual merits.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,578,168      Parulkar et al.

This patent teaches a boundary scan cell design which places the multiplexor before the functional flip-flop on the functional path, reducing the multiplexor delay in the critical path. In order to ensure that boundary scan mode functions properly, the functional flip-flop may be designed to act as a buffer, i.e. become transparent, when the boundary scan cell is in boundary scan mode. See claim 1.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Britt whose telephone number is 571-272-3815. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2138

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Cynthia Britt  
Primary Examiner  
Art Unit 2138